



Community Energy
State of the Sector Report
2022

Produced by:



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About the research

The annual **Community Energy State of the Sector** survey and report has provided insight into the UK community energy sector since

2017. This report focuses on progress made in 2021, describes how and why the sector is changing, highlights its potential, and provides a strong evidence base to encourage policy-makers and other stakeholders to create a more supportive policy landscape for community energy at local, regional and national level.

Data collection, analysis and reporting was carried out for the first time in-house by Community Energy England, Scotland and Wales between February and May 2021. We have dedicated considerable time this year to updating and restructuring our datasets to derive as complete a picture of the sector as possible. As a result, we have uncovered previously unreported data which was not available for previous analyses. This data is included in our analysis for this year and when drawing comparisons with previous years, any discrepancies with previously-reported data can be attributed to these retroactive additions.

We are indebted to the 229 community energy organisations that took the time to complete the survey, and whose responses provide the basis of this report. The dataset is supplemented by data gathered from a further 266 organisations via previous State of the Sector surveys and desk-based research.

Community Energy England, Wales and Scotland conduct this research to:

- further understand the current state of the sector;
- identify evidence-based areas of growth and opportunity;
- add to our robust dataset on the community energy sector;
- enable us to advocate more effectively for our members.

The State of the Sector 2022 UK report is sponsored by SP Energy Networks and has been developed alongside additional regional community energy research reports on behalf of Electricity North West, Northern Powergrid and SP Energy Networks.

The views in this report are based on findings from the State of the Sector survey and feedback from members of Community Energy England, Wales and Scotland, and do not necessarily represent the views of the report sponsors.

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We are very grateful to the sponsors of this year's report:

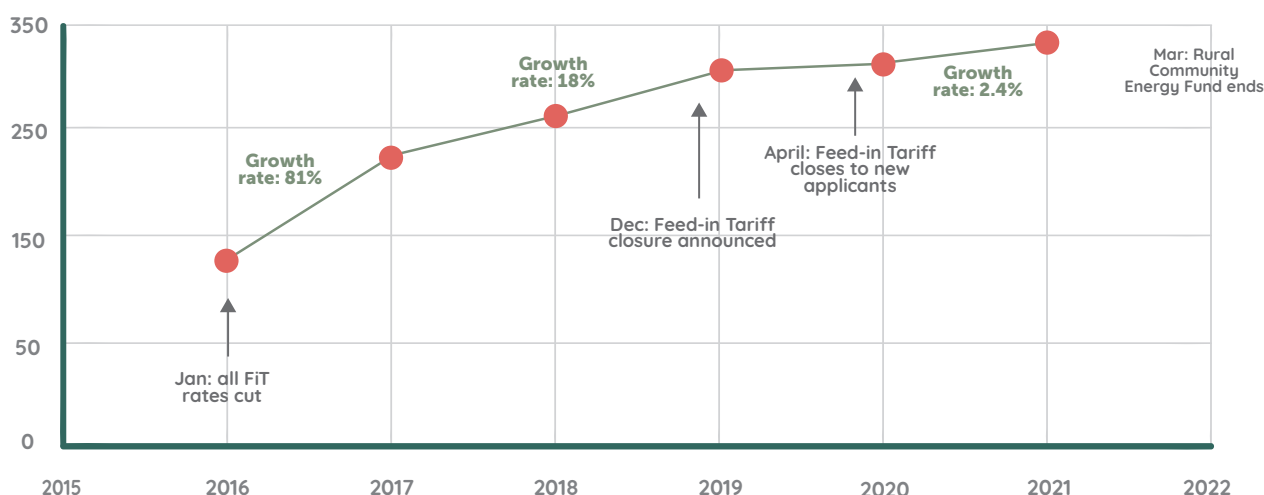


Headlines

Generation capacity represents a significant proportion of the sector's activities, and is its main source of income, but the sector is becoming increasingly diverse in the range of work it is involved with. Despite the challenges of Covid-19 and removal of support mechanisms the sector has continued to develop and install new projects, although the rate of growth has slowed since 2017.

The people driving the sector remain engaged and committed to exploring new opportunities despite the barriers. Energy efficiency and low carbon transport activities have increased in number and in scope, partnership working is being used to fill in gaps in knowledge and resource, and the level of investment in the sector has been maintained, though it is notable that the types of investment pathways have shifted somewhat in 2021 compared with previous years.

Growth of community-owned electricity capacity in UK



In 2021:

90 organisations

delivered a range of low carbon transport activities including installing 113 electric vehicle charging stations;

installed 7.5 MW of new renewable electricity capacity,

taking the total community owned capacity in the UK to 331 MW;

raised £21.5m

investment for new projects across the UK.

The community energy sector engaged with

217,489 people

across the UK via an extensive network of members, volunteers and paid employees;



18 new community energy organisations,

bringing the total to 495 across the UK;



engaged 57,600 individuals/communities

via energy efficiency initiatives, helping save an estimated £3.35m from people's energy bills;



The current policy landscape

Policy barriers still prevent the community energy sector from playing its vital roles in the just transition. The IPCC report emphasises that it is 'now or never' for drastic action on the climate emergency and that community energy can be transformative.

Community Energy was mentioned in the Energy White Paper and Net Zero Strategy but no plan was offered, no recognition given of its key importance to achieving net zero and no 'practical support measures' were provided as recommended by the Environmental Audit Committee*. The Energy Security Strategy promised to "prioritise putting local communities in control" but this involved "a limited number of supportive communities" being bribed to "host new onshore wind infrastructure in return for benefits, including lower energy bills"

The Climate Change Committee has stated repeatedly that "it will not be possible to get close to meeting a net zero target without engaging with people or by pursuing an approach that focuses only on supply-side changes". However, the PM's Ten Point Plan, the National Infrastructure Strategy and the Spending Review mostly focussed on big cheque, technical, centralised, supply-side measures.

The Net Zero Strategy recognised the importance of communities and local climate action and both it and the Levelling Up White Paper emphasise 'empowering local leaders'. Unfortunately, they seem to mean 'local government leaders', ignoring the leadership of community energy over many years on local climate action and community support. Virtually all the resources are channelled towards local authorities.

Meanwhile, in England, the last dedicated central government support for community energy, the Rural Community Energy Fund which provided project development funding, was allowed to end on 31 March 2022 without any form of replacement. In its place the government recommends community energy 'work closely with local authorities' to access UK-wide capital and revenue growth funds.

In Scotland, capital loans and enablement grants are available to established groups through the Community and Renewable Energy (CARES) scheme. However there remains a gap in early stages support for new groups.

In Wales, the Welsh Government Energy Service supports community renewable projects with technical support, grants and development loans. As part of the Welsh Government's commitment to the expansion of renewable energy generation, there is a target for public sector and community organisations of over 100MW by 2026.

Go to our "What we need" page to find out more about our policy asks.

(* Recommendations from the Environmental Audit Committee, see bit.ly/EAC-letter)

What We Are Doing

- Survey responses identified 80 stalled projects totalling 68MW stalled capacity, 53 of which were electricity generation projects and 19 energy efficiency.

- In 2021, 18 new organisations were registered. This demonstrates the continued enthusiasm to get involved with the sector - enthusiasm which must be harnessed or it will dissipate.

- Despite financial and regulatory barriers, 23 new electricity generating projects were created. 123 organisations have been involved with energy efficiency and advice projects more broadly, reaching over 53,000 people.

2021

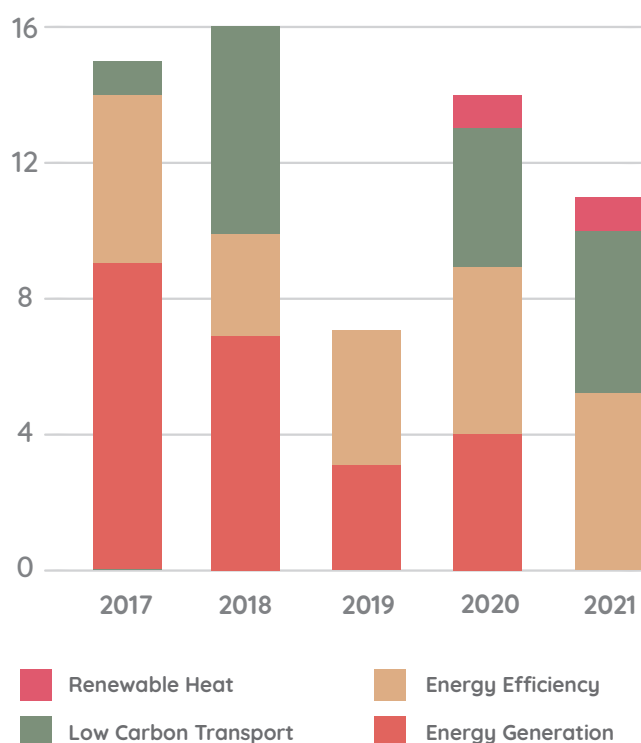
Community energy in the UK



The Covid-19 pandemic made analysis of the community energy sector's activities in 2020 more difficult. Many organisations paused their core activities to focus on providing pandemic support, which complicated efforts to gain a true appreciation of the longer-term impacts of energy sector policy changes.

Electricity generation has long dominated the community energy sector in terms of the volume of projects being developed. Although generation capacity growth rates have slowed year on year since 2017 to 2.4% in 2021, the continued growth over the last few years, despite the closure of the Feed-in Tariff and a global pandemic, is indicative of the inherent resilience of the sector and the commitment of those working within it.

Project types developed by new community energy organisations:



2021 saw a level of normality return to the sector, as the majority of social restrictions were removed and organisations refocused their activities back to community energy. The sector welcomed 18 newly registered organisations in 2021, a higher number than the 5-year average of 16, bringing the total number of organisations to 495.

It is notable that the type of project being developed by newly formed organisations has shifted away from electricity generation in 2021. For the first time in several years, no new organisations reported involvement with an active electricity generation project, opting instead to focus on energy efficiency, low carbon transport and renewable heat initiatives, perhaps reflecting the perceived difficulty of developing community-scale generation projects in a post-FIT environment.

2021

Community energy in the UK

Across the 495 identified community energy organisations, 57% are registered as Community Benefit Societies (BenComs), Cooperatives or Community Interest Companies, with the remainder primarily made up of limited companies, charitable groups and unincorporated community groups engaged in energy activities.

This distribution is somewhat different in Scotland, where the dominant legal structure is the Company Limited by Guarantee (CLG) accounting for 41% of organisations. This is likely a remnant of the distinct nature of the early engagement of communities with renewables in Scotland, which were almost exclusively through development trusts, acting alone or collaboratively, utilising wholly owned trading subsidiaries to develop community energy projects. Since 2015, the legal structure adopted by newly formed organisations in Scotland has mirrored the rest of the UK with around 60% of new orgs registering as BenComs compared with only 15% CLGs.

Community organisations in 2021 powered by:

3,325 volunteers

58,000 members

Approximately 30% of community energy organisations employ paid staff: an estimated 644 full time equivalent staff members in total in 2021, although the majority of these are part-time. 183 new FTE posts were created in 2021 alone, more than twice as many as 2020, though it is difficult to say whether this represents true additional capacity as the nature of employment in the sector is often dependent on short-term funding, which can lead to a higher turnover of staff. Either way, approximately 70% of organisations operating in the sector are supported entirely by volunteers, who are the driving force behind the sector despite many having limited time to commit to project development.

Community energy groups were further supported by over 58,000 members, including local community members, investors and shareholders. A significant proportion of these – c. 20,000 members – have invested in community energy schemes via share offers managed by co-ops and bencoms affiliated with “umbrella” organisations such as Energy4All, Repowering London, Sharenergy and Communities for Renewables. It is notable that the majority of community share owning members (c.17,000) joined between 2010 and 2017, a period characterised by numerous, large community investment opportunities. It is notable that the majority of community share owning members (c.17,000) joined between 2010-2017, a period characterised by numerous, large community investment opportunities, although umbrella organisations continue to offer valuable support to communities.



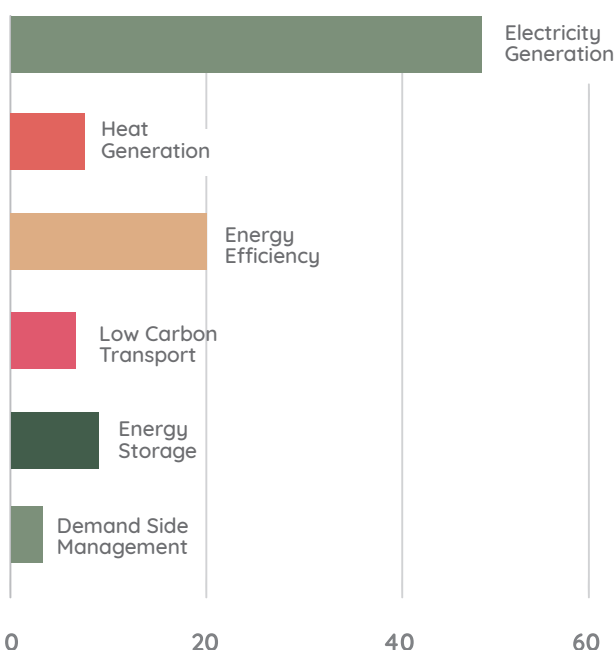
2021

Challenges

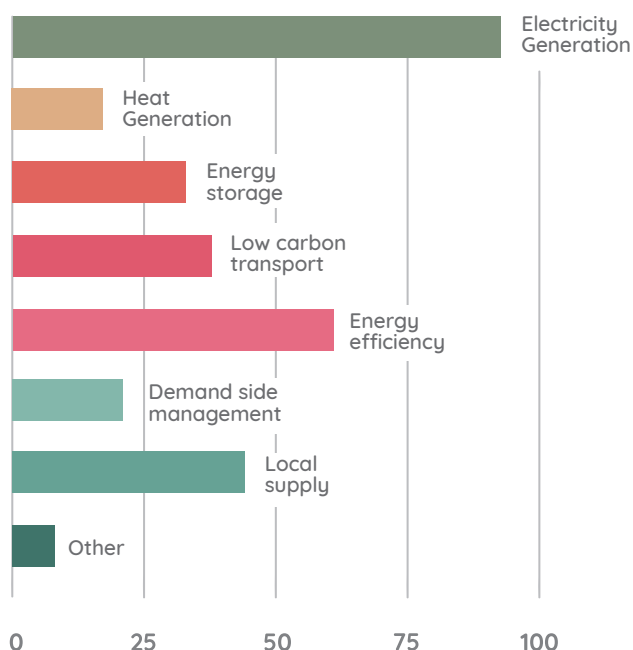
Across the UK, 81 community energy organisations reported one or more stalled projects – 65% more than in 2020. The majority of these were electricity generation with a total potential capacity of 68 MW. The number of stalled projects has also increased by 32% in 2021.

A lack of organisational capacity is still the most common reason for incomplete projects. The sector may have created twice as many FTEs as the previous year but most of the new capacity was concentrated within established organisations with existing staff developing larger scale projects. 70% of the sector is still supported almost entirely by volunteers so, for most organisations, capacity is an ongoing and significant barrier.

Number of stalled projects



Future project types planned



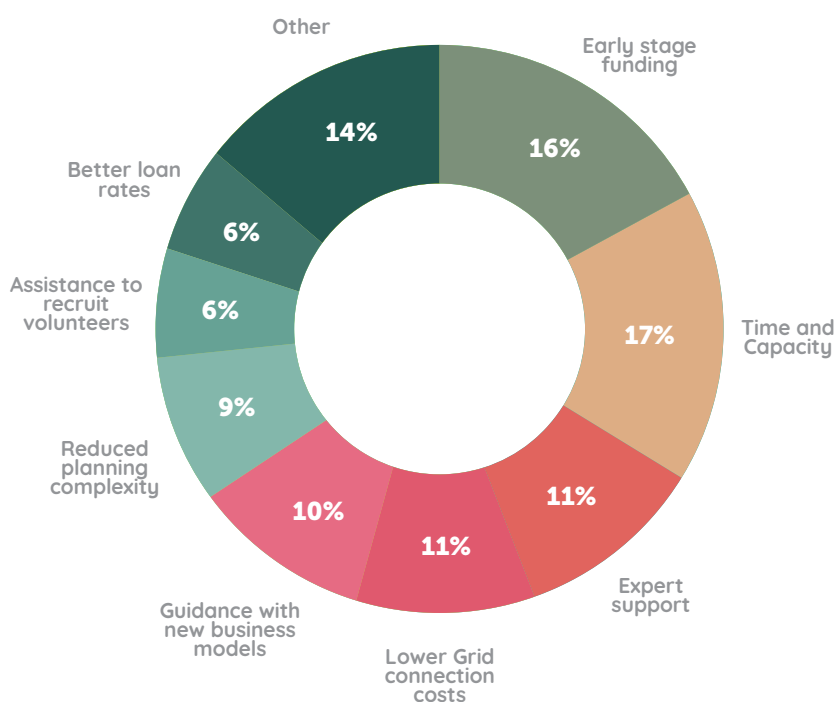
The high number of stalled electricity generation projects is perhaps to be expected given their popularity over other development areas in recent years but, despite the problems, 90 organisations reported an intent to develop electricity generation projects in the near future.

It is worth noting that around half of these groups are well established, supported by paid staff, and own their own generation assets, so would perhaps be less affected by issues of limited capacity and technical expertise than other groups.

2021

Supporting community energy

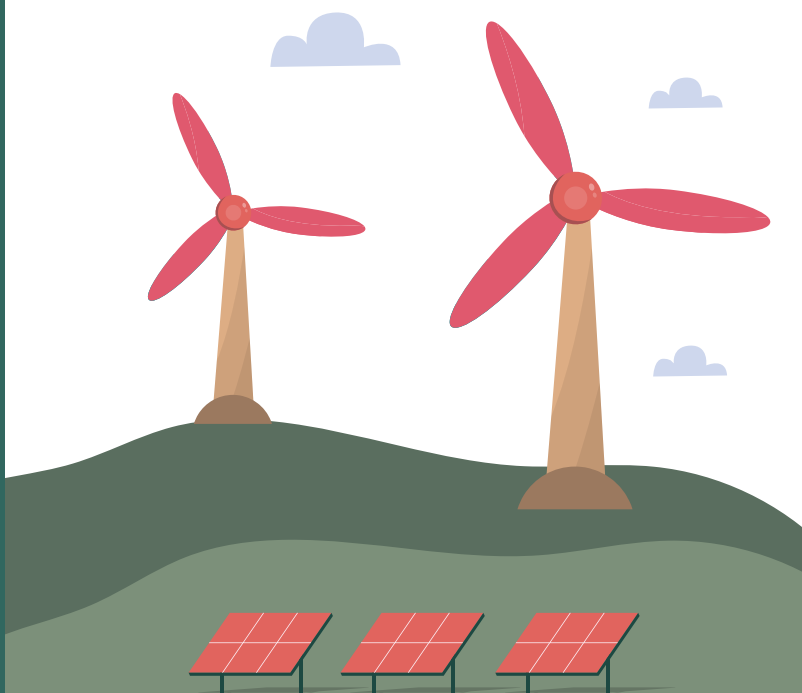
The support that organisations need:



In many cases, community organisations have multiple roles and interests, including but not limited to energy projects, which affects their ability to progress towards installation/completion, particularly as projects increase in complexity. While organisations reported a refocusing back to their core activities following a period of intensive community pandemic support in the preceding year, a supply chain backlog as a result of COVID-19 was reported by many groups, citing a lack of installers and contractors and delays in the delivery of technology and equipment stopping projects from progressing.

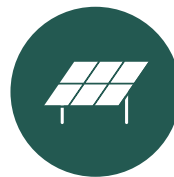
Financial barriers were another key issue, specifically a lack of feasibility and/or development funding, difficulties raising capital funding, and high grid connection costs.

There is strong support for legislative changes to enable the local supply of electricity generated by community-owned energy projects, as well as calls for more assistance from local authorities, including more supportive planning policies and more meaningful cooperation and encouragement.



2021

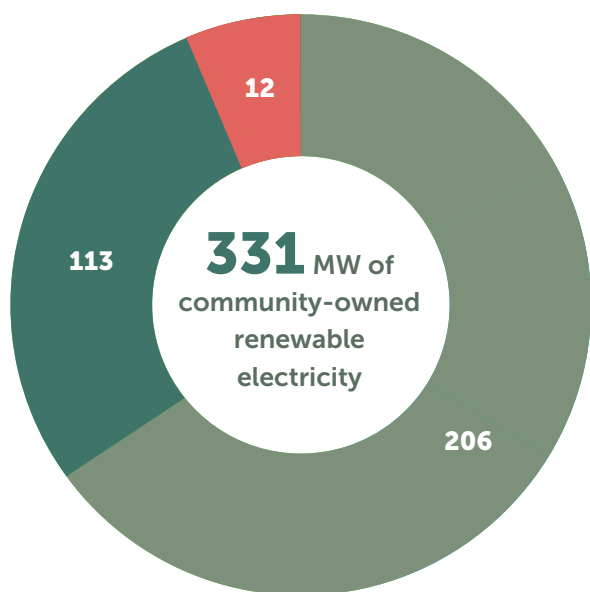
Electricity generation



In 2021, 271 community organisations were involved in electricity generation projects across the UK. 23 new electricity generation assets were installed, the lowest number since 2017 and a 32% decrease on last year. The new installations represent 7.6 MW of new community energy capacity, comprising 2.6 MW of solar PV across 17 sites, 2.7 MW of wind across 2 sites and 2.3 MW of hydro across 4 sites. This brings the total community owned electricity generation capacity across the UK to 331 MW, which equates to a growth rate of 2.4% in 2021, down from 5% in 2020.

Solar PV projects continue to dominate in terms of the number of new installations. The majority are small scale rooftop projects between 5-50 kW, with 4 larger 100-150 kW assets all located in England. In terms of new installed solar PV capacity, 2021 represents a decrease of 62% on the previous year.

Wales played host to the only large-scale wind development of 2021, Ripple Energy's 2.5MW Graig Fatha wind farm - the UK's first consumer-owned wind farm. Their clean energy ownership platform enables households and businesses to part-own new wind farms and solar parks and benefit from reduced electricity prices by linking their electricity consumption with their share of the renewable energy installation.



Solar PV
 Wind
 Hydro



Generating
506 GWh of electricity

Saving
143,000 tCO₂e annually

Powering
174,000 UK households

All new hydro capacity was located in Scotland, the largest being the long awaited 1.6MW Barr Hydro, which was commissioned in July 2021 after 5 years of planning.

It is noteworthy that 2.1MW of the 7.6MW new capacity in 2021 attracted Feed-in Tariff (FIT) support as at least 2 pre-accredited projects were given deadline extensions into 2022 due to Covid-19. This suggests that the full impact of the withdrawal of the FIT is yet to be felt as the sector continues to adapt to a post-subsidy environment.

2021

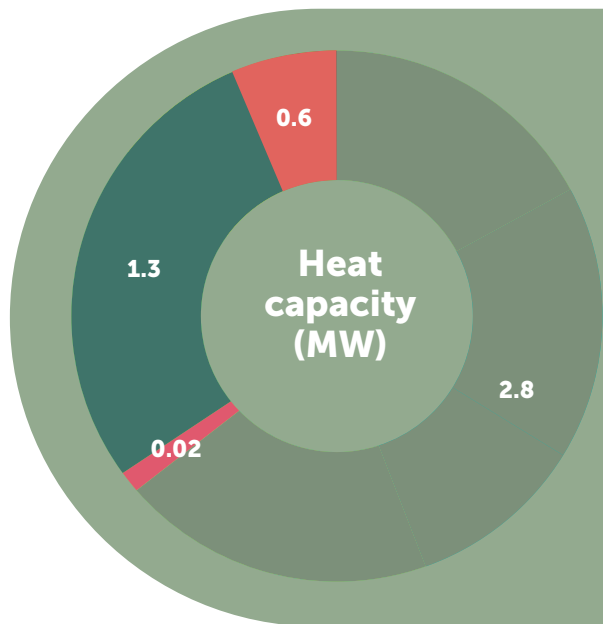
Heat generation

Renewable heat generation remains a challenging area for community development, with 28 organisations currently involved in heat projects but only 3 new heat installations reported in 2021, with a total capacity of 138 kW. All 2021 projects involved heat pumps, two of which secured Renewable Heat Incentive (RHI) subsidy support.

4.7 MW
of community-owned
heat capacity

28 organisations
developing heat
projects

Compared with 2020's 706 kW of new heat capacity, 2021 represents an 80% decrease. RHI support closed to new applicants for eligible non-domestic installations in March 2021, but data from previous years suggests that was likely not a significant factor in the decrease. New capacity in 2020 actually represents an anomalous high point for the sector over the last few years: figures for 2018 (144 kW) and 2019 (27 kW) highlight that even with RHI support in place, community-owned heat projects are difficult to progress.



Despite these difficulties, 18 organisations expressed a desire to develop future heat projects, citing heat networks and heat pump bulk purchase schemes as potential opportunities. This is particularly true for organisations in off-gas grid areas, where heat pumps are a more viable alternative due to higher heating bills. That being said, organisations cited several significant barriers to development: the high capital costs involved in heat networks; a lack of technical expertise; and problems securing investment due to difficulties securing sufficient long-term heat demand when establishing project viability.

- Heat Pumps
- Biomass
- AD
- Solar Thermal



2021

Low Carbon Transport

90

community organisations delivering LCT projects

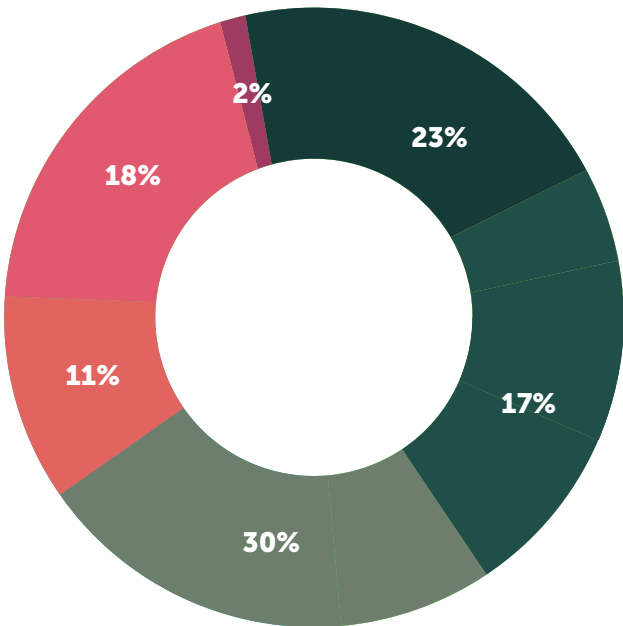
113

new community-owned charge points installed



Over the last few years, community groups have continued to turn their attention to low carbon transport (LCT) project development and there has been a notable shift away from EV ownership models toward a whole system approach. In 2021 only 53% of activities focused exclusively on ownership of charging points and electric vehicles such as cars and mini-buses, compared with 89% in 2020.

EV and charge point ownership do still form the majority of activities but organisations are deploying a broader range of transport options from facilitating car sharing, e-bikes and other forms of active travel, to incorporating travel planning, EV education and infrastructural improvements. E-bike provision is particularly popular, with 18 community organisations providing this service in 2021.



LCT Project Types

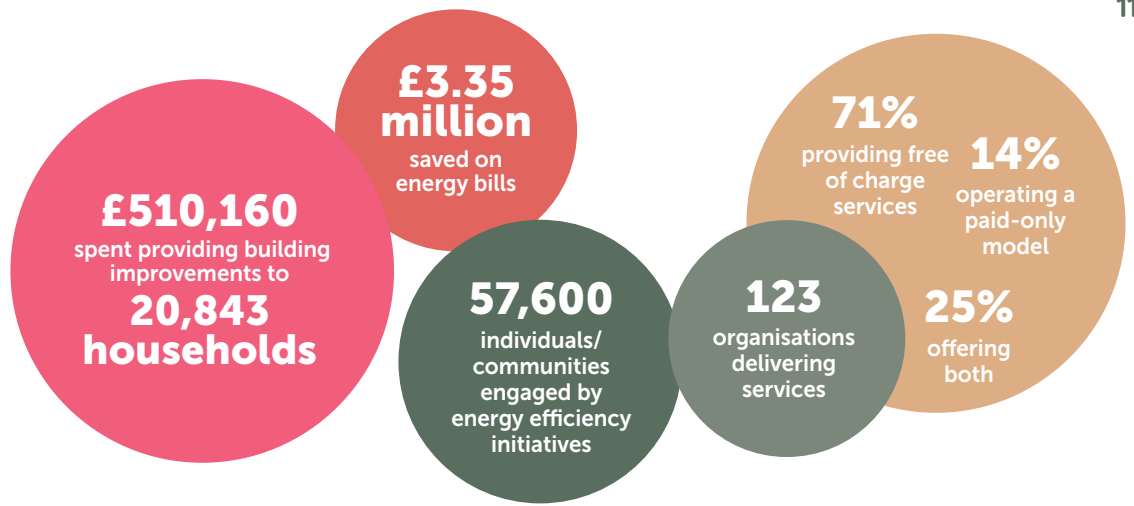
- Electric vehicles
- Car share
- EV Charging
- EV Education
- E-bike
- Other

28 low carbon vehicles were purchased by community groups across the UK in 2021, increasing the total number owned by communities to 218, an increase of 15%. The growth of community-owned EV charge points was even more pronounced, increasing by 114% since 2020. Most of these were installed by one organisation, Charge My Street, following an expansion of their community EV charging project across Northern England. The project enables communities to identify, finance and install EV chargers in areas which have the greatest demand, including locations where off-street parking is not available.

Only 8% of all stalled projects in the past year were LCT projects, indicating there are fewer significant barriers to development than for other project types. Indeed, 38 organisations indicated they were planning low carbon transport projects in 2022, with EV charge point installation the most commonly cited.

2021

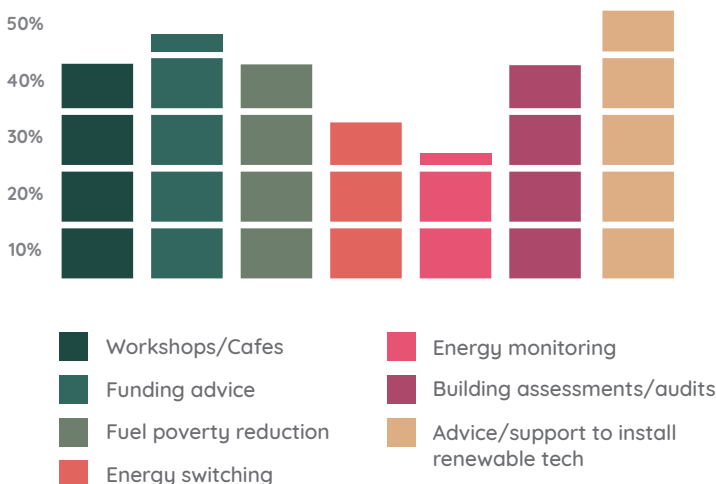
Energy efficiency



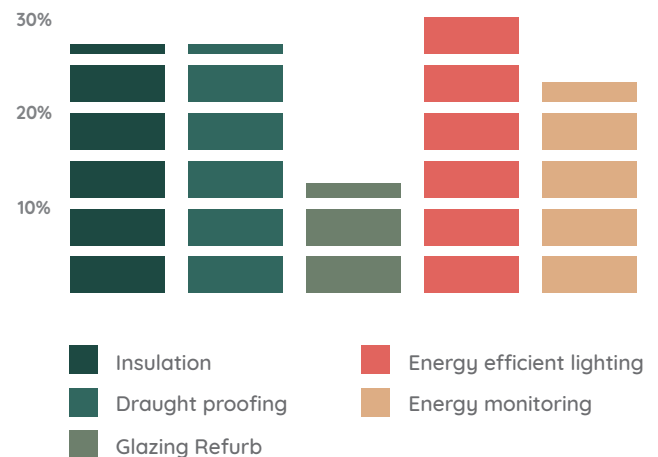
Energy efficiency continued to play a key role in community energy sector activities in 2021, with 123 organisations delivering services in areas such as building improvement, advice and education, and the distribution of direct funding for energy efficiency works. This marks a 38% increase since 2020 - energy efficiency programmes, particularly education and outreach activities, can be delivered at relatively low cost which makes them an attractive option for organisations with limited resources. The growth of this area of the community energy sector in 2021 demonstrates the further potential for community energy to respond to the energy price crisis and rapidly-increasing levels of fuel poverty around the country.

Free services were largely facilitated by grant funding and income from community benefit funds derived from electricity generation, and involved low cost interventions such as advice on energy efficiency technologies and signposting to funding sources delivered via workshops, cafes and telephone consultations, as well as direct installation of measures such as simple draught proofing and LED lighting. Those organisations offering paid-only services were predominantly operating on a sustainable not-for-profit basis without grant support, delivering higher cost initiatives such as thermal imaging, whole-house retrofit and building audits.

Orgs delivering advisory services



Orgs delivering improvement services



In 2021, Cwm Arian Renewable Energy provided energy efficiency advice and improvements to over 7,000 people across West Wales, helping people to save £37,500 on their energy bills. This work was informed by their Pembrokeshire Energy Efficiency research project which sought to develop a blueprint from which they could effectively mobilise people to take meaningful steps towards making their homes more energy efficient.

2021

Energy Storage & Flexibility

Storing energy for later use is a key mechanism to enable smarter, more flexible energy systems and can provide cost savings for consumers. Approximately 11% of community energy organisations are currently involved in energy storage and/or providing flexibility services, most of which are larger, well established and in possession of existing generation and storage assets they can use to exploit these new revenue streams.

In 2021, community-owned energy storage capacity increased by 154 kWh to 1.9 MWh. Electric batteries are responsible for 82% of this capacity, which is to be expected given the high levels of existing community-owned electricity assets offering integration opportunities, as well as increasing large scale production in recent years which has seen the price of electric batteries decrease. Heat batteries and hydrogen storage remain more of a niche area due to their higher cost, more limited availability and perceptions of technical complexity.

9 organisations reported stalled energy storage projects in 2021 with a potential capacity of 5MW. Difficulty accessing flexibility markets and lack of a viable business model were cited as key barriers. While commercial flexibility markets are well established, there is no domestic flexibility market in the UK, however some community energy organisations are beginning to see the value of taking on the role of ‘flexibility aggregators’ (intermediaries between electricity users and power companies), to sign up many individual households and small businesses to provide large ‘packets’ of flexibility.

Case Study

Flex Community

Flex Community is an innovative pilot project that centres and empowers consumers by exploring how ‘flexible’ households can be around the times they use electricity, with the aim of avoiding peak times and matching household demand to when there are more renewables available on the grid. This approach aims to reduce carbon emissions, electricity bills and the need for major grid upgrades. Bath & West Community Energy (BWCE) are collaborating with Avalon Community Energy, Stemy Energy and other community and environmental groups to deliver the Flex Community project over a larger area, to maximise the impact.

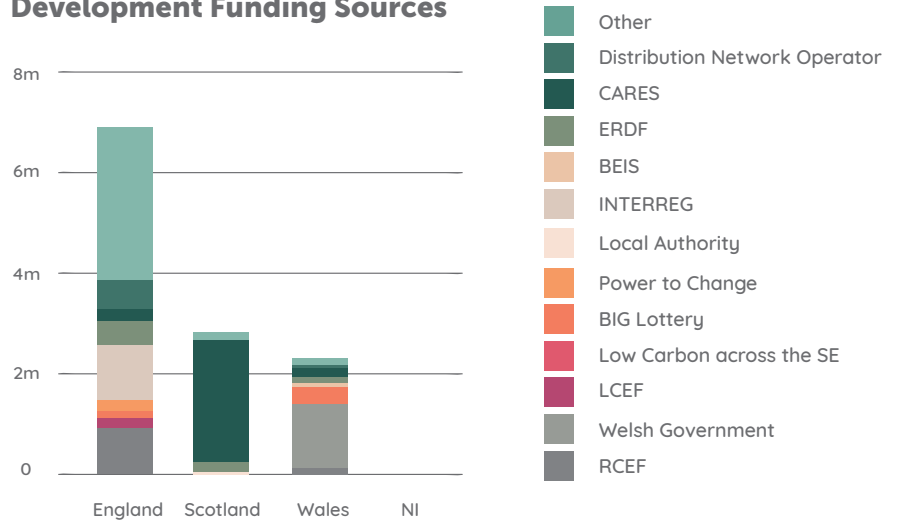


2021

Funding & Finance

£12.2m secured for project development across the UK

Development Funding Sources

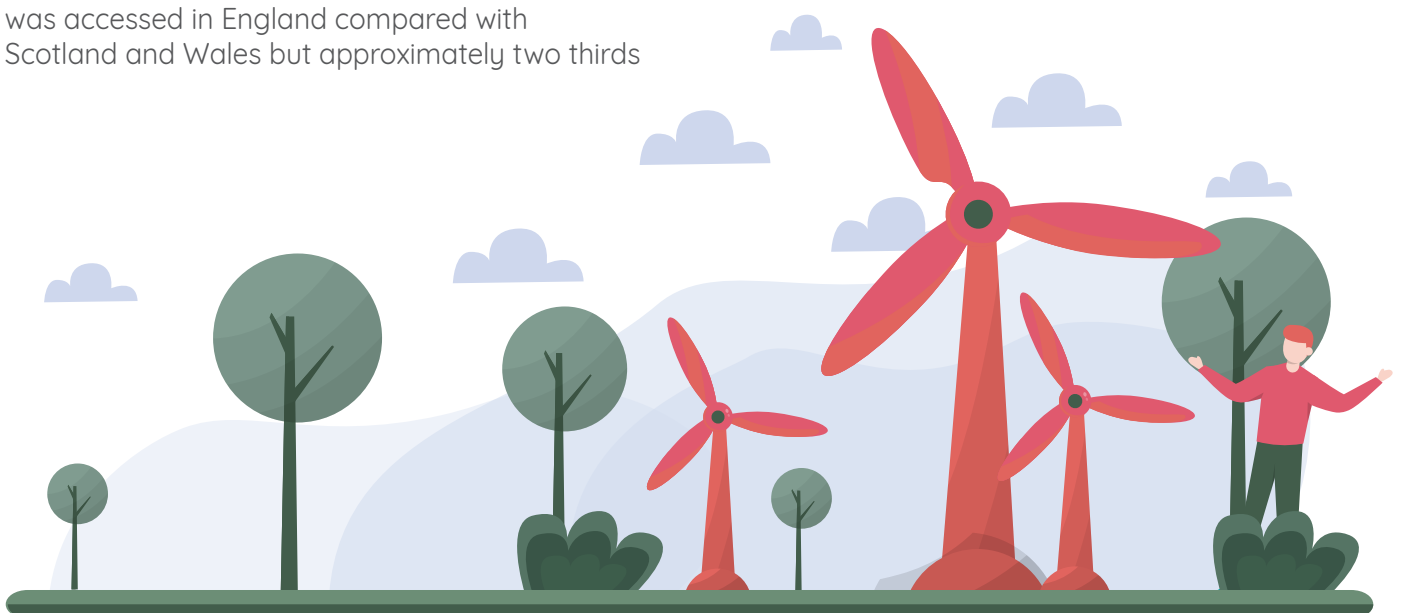


Community organisations secured £12.2m for project development/ feasibility work in 2021, with the Rural Community Energy Fund (RCEF), the Welsh Government Energy Service and the Scottish Government's Community and Renewable Energy Scheme (CARES) providing the largest amount of funding in each respective nation.

There continues to be a diversity of funders supporting the development of community energy projects, though this is most pronounced in England, no doubt due to the absence of a dedicated, nationwide fund equivalent to those available in the devolved nations. English organisations received significantly more local authority development funding than those in Scotland and Wales. More than half of local authority funding was secured by organisations in South West England with funds available via dedicated community energy funds offered by Devon County Council and Somerset County Council. A higher percentage of 'other' funding was accessed in England compared with Scotland and Wales but approximately two thirds

of this was raised by a single organisation - the Low Carbon Hub - with the aim of developing a pipeline of rooftop solar PV projects as well as supporting construction of their 19MW Ray Valley Solar park.

Welsh projects received a larger proportion of BIG Lottery funding and Scottish projects were most reliant on the Scottish Government's CARES funding. The BIG Lottery provided the only development funding for a project in Northern Ireland, led by Northern Ireland Community Energy.



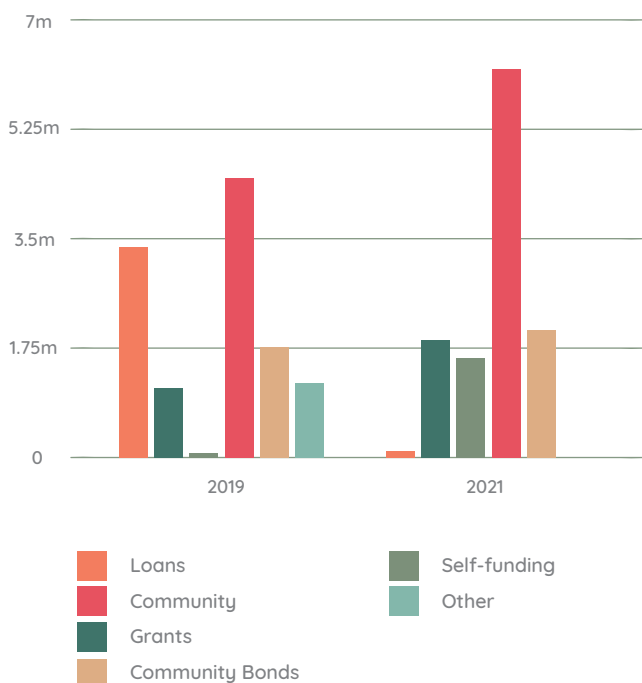
2021

Funding & Finance

£11.9m investment raised for new projects across the UK in 2021

Investment for new project delivery has remained constant in recent years, though the pathways for investment have shifted significantly. In 2021, the UK community energy sector raised £11.9m for new projects (not including refinanced investment), around the same level received in 2019 and 2020. This was primarily made up of self-funding (£1.7m), community shares (£6.5m) and grants (£2.2m), and supplemented to a lesser extent by bonds (£1.4m) and loans (£170k). Over and above this figure, one organisation, not wholly community-led but with a community partner, raised over £10m via loans, grants and self-funding.

Investment Types



Community share offers supported a range of projects including a hydro plant in Scotland, a wind farm in Wales, EV charge point installations across Northern England and a large scale ground mount solar park in the South East of England. Some assets supported by community share investment were successfully commissioned in 2021 but the majority are not yet operational with many due to start operations in 2022 and beyond, suggesting community energy organisations are successfully developing new business models after FITs.

Compared with 2019, the nature of investment has shifted significantly. While community shares remain popular, self-funding has increased more than tenfold from £100,000 in 2019 to £1.7m in 2021. This was accompanied by a significant fall in loan-based investment from £3.7m in 2019 to £170k in 2021 and a 180% increase in grant investment. It is not entirely clear why self-funding has increased so significantly, though it may be a welcome sign that organisations are becoming increasingly more self-sufficient, nor why borrowing has fallen so dramatically. It is possible that ongoing Covid-19 restrictions resulted in projects, and therefore borrowing, being placed on hold or delayed, while at least 33 organisations reported that loan rates were a significant barrier to project development.



Nations in focus:

England & Northern Ireland

2021

308
FTE staff

over
£3million
saved from energy
bills in 2021

221 MW
of community-owned
electricity

17 community energy organisations were registered in England in 2021, the highest number of the past 5 years, and significantly more than in any other area of the UK. More volunteers than ever supported English organisations to deliver their projects, increasing from 1521 last year to 1887 volunteers in 2021, engaging over 75,000 people. In England, group membership levels are the highest in the UK with an average of 272, compared with 260 in Scotland and 239 in Wales. Since 2020, membership levels have grown by 73% to over 38,000, in large part driven by the sector's growing success raising finance via community share offers.

In England, only 2.4 MW of new community renewable electricity generation was installed in 2021, a 37% decrease on 2020, all of which was rooftop solar PV, along with two small heat pumps with a total capacity of 86 kW. This represents just under half the UK average growth rate and is the lowest level of all the UK nations. EV charging projects remain popular, with 86 new charge points installed, significantly more than Wales and Scotland, and 25% of organisations delivered valuable energy efficiency improvement and advisory services.

Community groups in England received over £7m of development funding from a diverse range of sources including the Rural Community Energy Fund (RCEF) (£1.1m), local authorities (£988,492) and network operators (£439,500). A lack of early stage funding was cited as a key barrier by 32% of community energy organisations and just under

30% of stalled projects were due to a lack of feasibility funding. Development funding secured in 2021 is significantly lower than Scotland and Wales, amounting to just 77p per head of population, compared with £1.35 and £1.90 in Wales and Scotland respectively. The closure of the RCEF fund will only increase this disparity, representing a further blow to eligible community organisations seeking financial support to build investment-ready projects.

Due to a lack of support mechanisms provided by the unstable Northern Ireland Executive in recent years, dedicated support for community energy in Northern Ireland is limited and the sector is lagging behind the rest of the UK. There is also an absence of a clear vision and commitment at national and local levels to develop the sector and embed community energy within energy and planning policy in the longer term. In 2021, NI had 1.7 MW of community-owned electricity generation capacity, largely made up of wind (1.5 MW) with a small amount of solar PV. There are signs that the benefits of community energy are starting to be more widely recognised and development activity is increasing. A new NI organisation, Edenderry Village Energy, was registered in 2021 and secured a BIG Lottery grant to assess the feasibility of a community district heating network, while Northern Ireland Community Energy (NICE) has plans to install more solar PV and is looking into battery storage and EV charging.

323 active
community
energy
organisations
in England;
3 in Northern
Ireland



Nations in focus:

Wales

2021

145
FTE staff

engaged over
138,000
people

27.5 MW
of community-owned
electricity

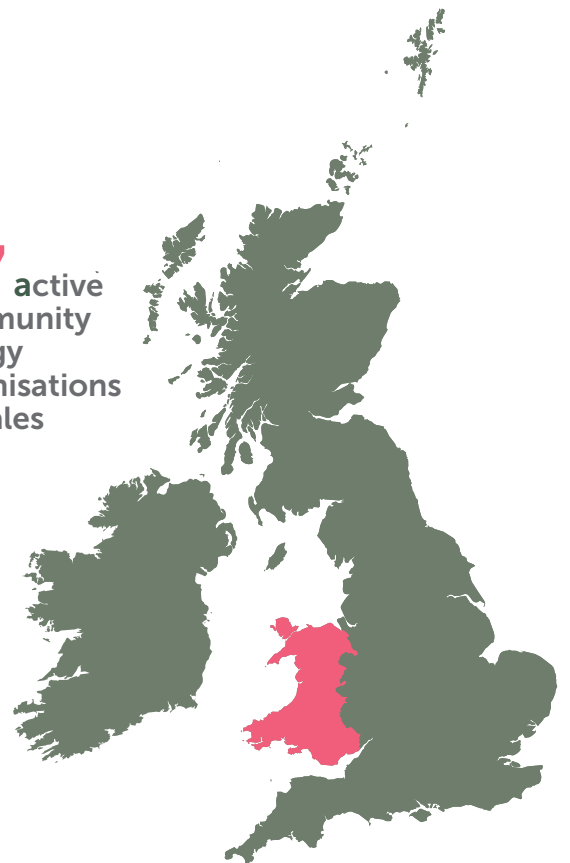
67 community energy organisations were found to be active in Wales, providing employment to 145 FTE staff, 79 of which were employed in 2021. This is a significant increase on 2020 and may point to the growing professionalisation of the sector.

New electricity generation capacity of 2.7 MW was reported, approximately half that of 2020, bringing the total to 27.5 MW. Electricity generation activity in Wales was a little more positive than the wider UK picture with an electricity capacity growth rate of 13% in 2021 – higher than both England and Scotland. Virtually all of this new generation can be attributed to Ripple Energy's 2.5 MW Graig Fatha wind farm, with the remainder accounted for by 2 small solar PV installations. Heat and energy storage projects remain challenging to implement across all UK nations though Wales was marginally more successful, evidenced by the addition of one 52 kW ground source heat pump and two electric batteries with a combined storage capacity of 69 kWh. The future outlook for energy storage development looks more promising, however with 10 organisations indicating their intent to pursue projects in 2022.

As with the rest of the UK, Welsh organisations are embracing more low carbon transport and energy efficiency activities as electricity generation projects become less attractive in the absence of subsidy support. 11 new electric vehicles were purchased in 2021, an increase of nearly 50% on last year and EV charge point ownership showed a similar profile with a 60% increase. Organisations delivering energy efficiency activities increased from 13 to 20, delivering a range of advisory services and building improvements which brought savings of £220,000 to communities – an average saving of around £600 per employee/volunteer. This is 3 times higher than in Scotland but lower than in England where the average saving per employee/volunteer was £3400.

Organisations continued to be well supported by the Welsh Government through 2021, having received 54% of the £2.3m total development funding received by the sector. This contribution is 30% lower than in Scotland but compares favourably with England where the central government contribution was only 15%. Welsh Government funding was complimented by significant contributions from the BIG Lottery, the Department for Business, Energy and Industrial Strategy (BEIS) and the RCEF. Investment for new projects totalled £4.3m, the majority of which was raised via community share offers totalling £2.3m and grants at £1.6m. It is also worth noting Mentor Mon's £30m EU-funded grant for their innovative Morlais tidal energy project, which has the potential to bring considerable community benefit in the coming years.

67 active
community
energy
organisations
in Wales



Nations
in focus:

Scotland

2021

192
FTE staff

852
volunteers

82 MW
of community-owned
electricity

103 community energy organisations were found to be active in Scotland, providing employment to 192 FTE staff, 26 of which were employed in 2021. This represents a 33% increase in total staffing levels from last year leading to the highest average number of paid staff of all UK nations – only a little higher than Wales where groups are similarly well resourced, but over 3 times higher than England.

Scottish organisations are also supported by a higher number of volunteers, averaging 19 per organisation compared with 16 in Wales and 11 in England. The number of volunteers increased by 24% in the last year from 689 to 852, and organisations boasted a combined membership of 10,400.

77 active community organisations were identified with a combined electricity generation capacity of 82 MW, dominated by onshore wind (89%), but also including hydro (8.3%) and solar (2.7%). 2.5 MW of new electricity capacity was installed in 2021, 64% less than 2020, comprising 2.4 MW of hydro, 0.18 MW of wind and a small 33 kW solar PV installation linked to 75 kWh of electric battery storage. This is broadly in line with the 2021 UK growth rate.

Scottish organisations received £2.8m development funding in 2021 (23% of the UK total), the vast majority of which (88%) came from the Scottish Government's CARES programme, highlighting the ongoing importance of this fund and the relative absence of alternative funding pathways for early stage project development. Even so, 25% of Scottish groups stated a lack of capacity to act on this support, with at least two groups calling for funding to employ local project officers over longer time periods. Investment for new projects totalled £2.4m, the majority of which was raised via community share offers totalling £2.1m.

In 2020, Scotland contributed just under 60% of the UK community benefit fund total and reported more than double the UK average spending per group, primarily attributable to the significantly higher level of onshore wind capacity and the community income derived from these. In 2021, however, Scotland's contribution fell significantly due to the failure of the subsea cable connecting the northern half of the Western Isles to the mainland transmission network, which stopped electricity generation for 9 months of the year and deprived communities of the associated income. As community-owned wind farms' monetary contributions are based on financial performance rather than a set yearly stipend, this resulted in many community benefit fund distributions being suspended.

103
active
community
energy
organisations
in Scotland



The impact of community energy:

economic

Energy efficiency interventions saved an estimated £3.35m from UK energy bills. Income streams from community energy projects are commonly delivered directly to communities via community benefit fund distributions, which can take the form of grants or loans. In 2021, community energy organisations had a total community benefit fund value of £4.9m across 98 organisations, and distributed £1.35m. Energy efficiency projects and increasing awareness of low carbon technologies were reported as spending priorities for over 40% of community organisations managing a community benefit fund. However, initiatives around sustainable travel, sports clubs, local food growing, biodiversity, carbon reduction, fuel poverty and general environmental projects also received support. Indirect economic benefits that create value for the local economy are derived from local investment, income, and job creation by community energy organisations.

Total community benefit fund spending in 2021 was less than half that of 2020, although a significant proportion of this decrease can be explained by the aforementioned subsea cable failure that halted community wind generation on the northern half of the Western Isles through much of 2021.

In terms of funding, 45% of organisations reported offering grants or donations to organisations and individuals, with the vast majority sourced from community benefit funds and some, particularly distributions related to energy efficiency activity, funded by grants provided from national and local government. In total, community energy organisations were found to have provided energy efficiency grants worth £470,000 to over 4500 recipients during 2021, including support for building upgrades, training for local energy champions, and direct payments in the form of fuel vouchers for those in fuel poverty.

In terms of wider economic benefit, an average of 70% of community energy organisational expenditure was spent locally, amounting to just under £15m being directly used to support local economies. There are significant direct benefits from this in terms of increased income for local businesses and communities as well as the knock-on effects of more jobs, higher pay, strengthening local supply chains and increased living standards, demonstrating how community energy organisations can play a key role in community wealth building.

Energy efficiency interventions saved an estimated £3.35m from UK energy bills

183 new full time equivalent jobs created in 2021

£15m of community energy income spent locally, boosting local economies

Community-owned wind farms have been shown to provide an annual average return of £170,000 per installed MW compared with £5000 per MW for private developments. This equates to 34x more benefit being distributed locally.

(Aquatera, 2021)



The impact of community energy:

social & environmental

2021

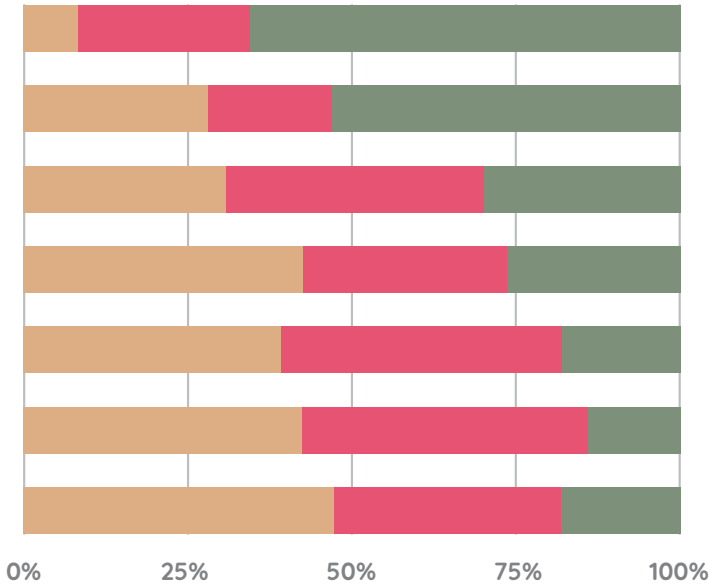
At least
143,000
tonnes of carbon saved annually

Community owned electricity powering the equivalent of
174,000
UK households

Approximately 65% of survey respondents reported CO2 reduction as a core goal of their activities. Where CO2 reduction was not a core goal, activities such as building capacity and skills and developing local support for renewable energy were cited as primary motivations. An estimated 143,000 tonnes of CO2 equivalent was avoided as a result of the 506 GWh of electricity generated by the community energy sector in 2021, which could satisfy the energy demand of approximately 174,000 homes. This number is a conservative estimate, however, and does not take into account the carbon savings from heat, transport and storage projects, or energy efficiency activities, which are more difficult to quantify.

Organisational impact

High Moderate Low



Reducing unsustainable land use practices

Alleviating fuel poverty

Capacity building & skills

Community ownership of assets/land

Local retention of community income

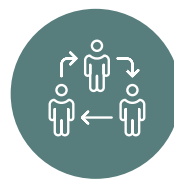
Developing local support for renewable energy

Reducing Co2

Community energy organisations also rated their level of impact in areas that aligned with their activities. Respondents reported their highest level of impact in terms of reducing CO2 emissions, with at least 40 of 72 orgs contributing directly via ownership of renewable generation assets and the remainder citing their role in influencing behavioural change and raising awareness of environmental impact via advisory services and educational programmes. In terms of the wider benefits for local communities,

organisations felt they had the most impact in terms of developing local support for renewable energy, supporting local retention of community income and positively influencing community ownership of assets and land. This demonstrates the unique ability of the community energy sector to not only have a direct environmental impact in terms of carbon emission reduction, but also deliver a wider range of economic and social benefits to their localities.

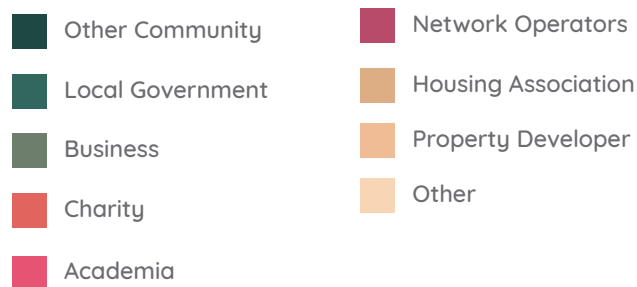
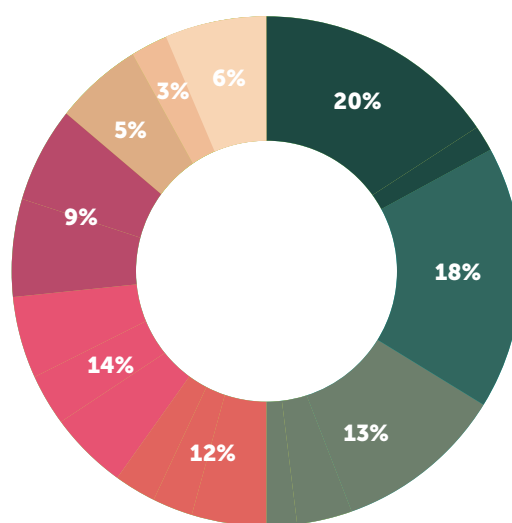
Networks & partnerships



Community energy organisations have a long history of embracing partnership working, whether with other community organisations, private developers, distribution network operators or local government. Community energy organisations have consistently highlighted lack of capacity, technical expertise and early stage funding as key barriers to project development in recent years. Partnership approaches go some way to addressing these issues, bringing mutual benefits such as the sharing of financial resources, expertise and best practice, and enhancing available staff time and capacity.

In 2021 alone, 128 respondents reported starting new collaborations or partnerships to progress a range of project types including energy generation, transport, demand management and community engagement. Other community groups proved to be the most popular partners in terms of completed and ongoing projects followed closely by local authorities, businesses and academia (including schools). A total of 55 partner projects were completed in 2021, the majority of which involved collaboration with schools, ranging from solar rooftop generation projects, delivery of energy education programmes and hosting onsite visits for students.

Community energy organisations: partnerships & collaborations

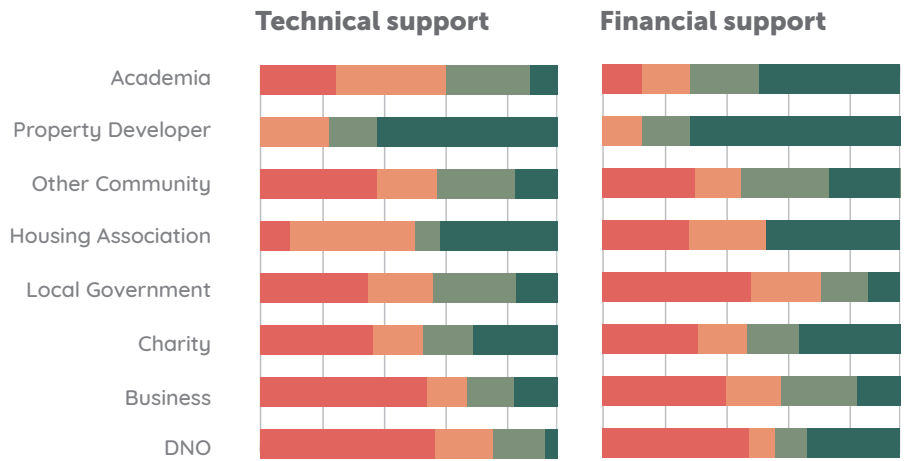
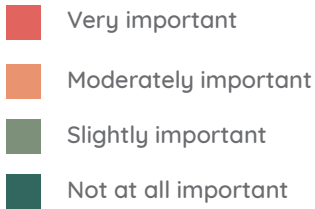


Case Study

Cyd Ynni

Cyd Ynni is a consortium of established community energy projects in North Wales that provides a platform for developing capacity and capability within Welsh CRE by creating opportunities for shared learning and vision between members. It provides a platform for discussion and knowledge exchange through steering groups as well as acting as a springboard for shared learning and capacity building where groups are at different stages of development.

Networks & partnerships



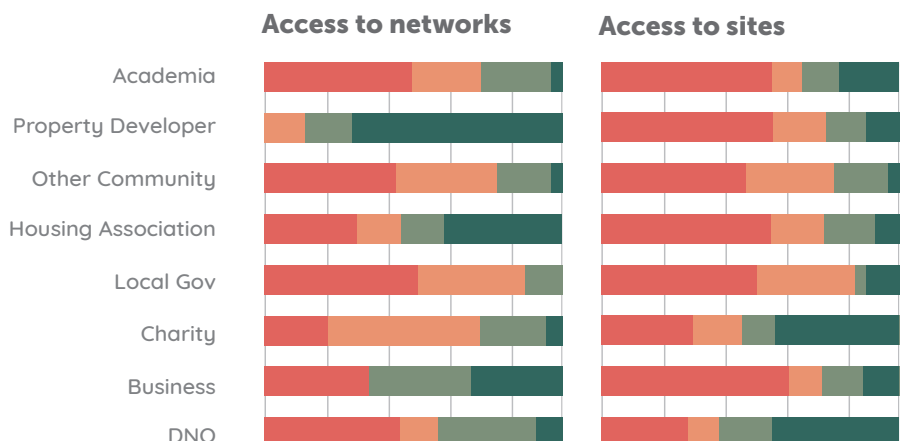
We asked community energy organisations to report the types of support received from partners as well as how important the support was to their projects.

Partnerships with businesses and DNOs were reported to be very important in terms of their technical and financial support, while most partner types were rated highly in terms of accessing sites for renewable energy generation development, particularly property developers, businesses and housing associations.

In terms of access to sites, local authorities were rated highly for providing opportunities and assistance. Community-owned solar PV assets on schools and

other publicly owned buildings have been an increasingly popular business model in recent years, which has led to long-term reductions in electricity bills for schools and income generation for communities. That being said, some local authorities are reluctant to engage with these opportunities, with several community organisations citing difficulty securing rooftop licence agreements as significant barriers to progress.

Of course there are many tangible benefits that community energy organisations gain from their community partners too, including an improved understanding of local needs, access to broader local networks, harnessing popular support for projects and access to crowdfunding.



What we need

Community energy organisations are proactive, tenacious and entrepreneurial, even in difficult times, developing new business models and innovative combinations of measures, such as generation, batteries with community EV charging points, onshore wind providing cheap energy for heat pump-driven heat networks, flexibility services built into all these, rural car clubs as a gateway to involving people in energy projects, and more.

Michael Gove, describing the UK Government's Levelling Up ambition, said, "This country won't achieve its full potential until every individual and community achieves everything of which they are capable. We need to fire up every resource we have." This is equally true for the net zero transition. The most cost-effective way to do this is to re-mobilise community energy.

The Environmental Audit Committee recommended the government remove barriers, produce a community energy strategy and introduce "practical support measures to harness the potential of community energy". Community energy is well placed, highly motivated and trusted. It is essential to help deliver the energy transition to a local, flexible, smart and participatory system which also uses

"Due to the urgency of the climate crisis and the vital roles communities will have to play in reaching net zero, it is essential that a timely solution to support the long-term growth of community energy across the UK is found."

Environmental Audit Committee recommendations to government (bit.ly/EAC-letter)

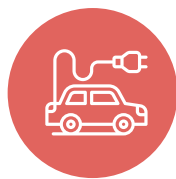
much less energy. This is at least as important as technological solutions and should be similarly resourced and supported by the government.

Data shows that the sector grew rapidly when support was available, then stalled when this was removed. In areas where even modest support is still available such as from the London Community Energy Fund, the sector is able to progress. Given support from government, the sector is ready to grow exponentially again towards becoming self-sustaining, through revolving development funding. Lessons must be learnt from the premature ending of previous support schemes. You must not clip the wings just before the bird takes flight.

Actions needed to meet the sectors potential:

- 1 **Create a Community Energy Strategy** to invest in and re-mobilise community energy by establishing a fair playing field for community-owned generation and a **National Community Energy Fund**.
- 2 Prioritise demand reduction and behaviour change by enabling community energy leadership in retrofit, **energy advice/ fuel poverty alleviation for the energy crisis**, demand management systems and driving behaviour change.
- 3 Take action to put community energy at the heart of the roll-out of Smart Local Energy Systems and Local Area Energy Planning.

What we need



1

Create a Community Energy Strategy to invest in and re-mobilise community energy, establishing a fair playing field and a route to market for community-owned generation, as has been provided for commercial developers of projects larger than 5 MWs by the Contracts for Difference scheme. Create a National Community Energy Fund.

Provide new community energy project development funding, available for community organisations in all nations and regions, and at all stages of development. This is demonstrably a good investment of government funds with a ratio of finance to development money of up to 70:1 in some regions.

- In England, reinstate the Urban Community Energy Fund and the Rural Community Energy Fund in the form of a National Community Energy Fund worth at least £28 million over 3 years that includes rural, urban, heat and retrofit projects. This will enable the transition to long-term sustainable development finance models.
- In Scotland, complement CARES with early stage capacity building support for groups as demonstrated by the Community Energy Futures programme.

- In Wales, increase the resources available to the Welsh Government Energy Service to accommodate the increased scale and complexity of renewable energy projects and expand the service to support other activities such as heat, energy efficiency and transport.
- Create a Community Smart Export Guarantee*, or similar arrangement, to provide revenue certainty for community energy organisations, as the commercial sector enjoys with the Contracts for Difference.
- Provide tax mechanisms such as the Social Investment Tax Relief* to recognise the benefit of community energy projects and harness increasing desire for impact investment - and a community energy business rate incentive.

* Recommendations from the Environmental Audit Committee, see bit.ly/EAC-letter

Boost demand reduction and behaviour change by enabling community energy leadership in retrofit, energy efficiency advice/fuel poverty alleviation for the energy crisis, demand management systems and driving behaviour change.

- Fund recent community-led proposals to BEIS for £15m to build capacity for local energy efficiency advice/remediation and for a £25m revolving fund for retrofit (for the 'unable to pay') in England.

2

What we need

3

Take action to put Community Energy at the heart of the roll-out of Smart Local Energy Systems and Local Area Energy Planning.

- Ofgem to create a framework to encourage Distribution Network Operators to collaborate constructively with, and support community energy. Ensure communities have fair access to the grid* by: reserving capacity for community projects; including social benefit and decarbonisation within Ofgem's and the Future Systems Operator's remit; and reducing or socialising connection costs for community energy generation.
- Pass and implement the Local Electricity Bill* or equivalent provision to enable local supply. Local supply is a fundamental enabler of a democratic energy system, and communities are locked out of the supply market.
- Remove planning barriers in England to onshore community- owned wind energy projects.
- Resource and implement a consistent process for Local Area Energy Planning*, with a clear role for community energy, as an essential part of the net zero transition. Resource community energy/public sector collaborations for the added value they bring, including, urgently, energy efficiency/fuel poverty advice.
- Ensure flexibility markets are fair and open, and the tender process is allowed to put a value on social and environmental outcomes.
- Introduce a meaningful commitment for all public bodies to buy community-owned energy.

*Recommendations from the Environmental Audit Committee, see bit.ly/EAC-letter

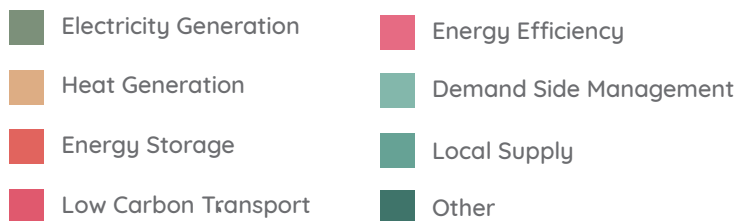


Looking toward the future

While the sector remains as determined and innovative as ever, the outlook for community energy development is a challenging one in light of reducing support mechanisms and entrenched regulatory barriers. However, there are opportunities for the sector to find development pathways that deliver multiple benefits to communities in the journey toward net zero.

160 community organisations have projects in active development. 114 projects are likely to be implemented in the next couple of years and 46 are longer term projects. 92 groups indicated an intention to develop electricity generation projects, with 57 at a later stage of development. 2 large solar farms with a combined capacity of 30 MW are being developed by the Low Carbon Hub and Plymouth Energy Community in England and Ynni Newydd is currently seeking planning consent for a huge 30 MW solar farm in Wales. A further 9 wind projects are planned including 1 large 19 MW wind farm due to be commissioned in Scotland in 2023. In the absence of subsidies, there is a need to develop projects at scale to ensure financial viability, and with these new projects the community energy sector across the UK looks to be responding with characteristic adaptability and tenacity. There is every reason to believe that the slowdown of the last few years may be a short term blip as the sector re-orientates toward a new period of sustained growth.

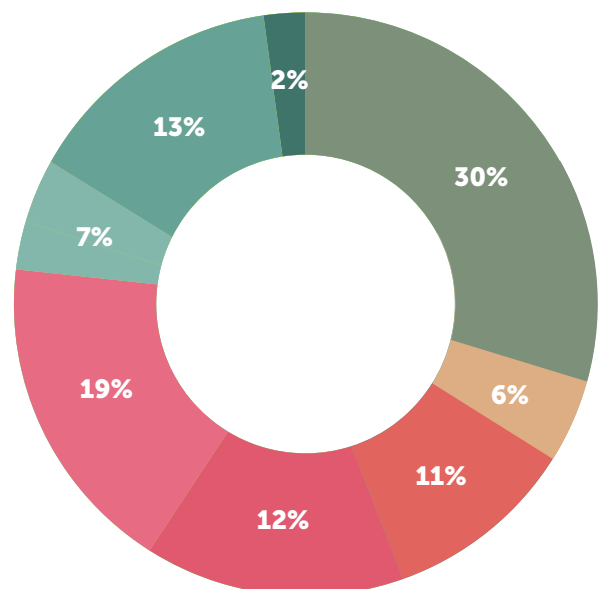
Future Project Development



Outside of electricity generation, 18 groups reported working on community scale heat networks as well as stand-alone renewable heat systems and the development of heat-as-a-service models, and 59 community-led-retrofit and energy efficiency are being planned.

In terms of longer term projects, ambition remains high with end-to-end retrofit, peer-to-peer trading and hydrogen projects all being cited as goals, with many organisations keen to use a whole system approach incorporating heat, transport and energy storage opportunities. Local supply within the context of wider local energy markets was also a recurring theme, the benefits of which are numerous, including opening up opportunities in domestic flexibility and helping to reduce constraints on distribution networks. Support for a right to local supply is gaining momentum and the campaign led by Power for People to bring about legislation to remove the cost and complexity of developing local supply arrangements may yet prove to be successful.

In recent years, the sector has shown adaptability and resilience in the absence of a supportive policy environment, and it will continue to do so due to the determination of community energy practitioners driving the sector forward. The outlook is positive, as evidenced by several large projects in planning which could see 80MW of new electricity generation commissioned by the end of 2024, nearly four times more capacity than the previous 3 years. The community energy sector is unmatched in terms of its ability to deliver local economic and social benefits, and harnessing its potential will accelerate the national drive toward decarbonisation and ensure that the benefits of a net zero energy system can be enjoyed by all.



About us

We invite all organisations working on or supporting community energy to join us, to strengthen our collective voice and enable us to represent you in our work to develop and support the sector. Details of how to join us can be found below.



Community Energy Scotland







Community Energy Scotland

Community Energy Scotland is a community energy specialist dedicated to providing communities across Scotland with independent and ongoing support to develop their own energy projects.

Our membership is free for all Scottish community energy organisations and individual supporters, and provides opportunities for organisations to consult with our team, network with other member organisations and receive regular community energy-related information.

Contact us for more information:

-  07920 182308
-  info@communityenergyscotland.org.uk
-  @CES_Tweet
-  www.communityenergyscotland.org.uk/membership

Community Energy England







Community Energy England

Community Energy England is the voice of the community energy sector in England, helping to create a supportive policy landscape for community energy.

We also help active community energy organisations to connect, collaborate, share expertise and overcome obstacles. Join us to demonstrate your support for the broader interests of the sector and our work to help create a policy landscape in which community energy can thrive.

Contact us for more information:

-  033 3303 4126
-  info@communityenergyengland.org
-  @Comm1nrg
-  www.communityenergyengland.org/pages/membership

Community Energy Wales







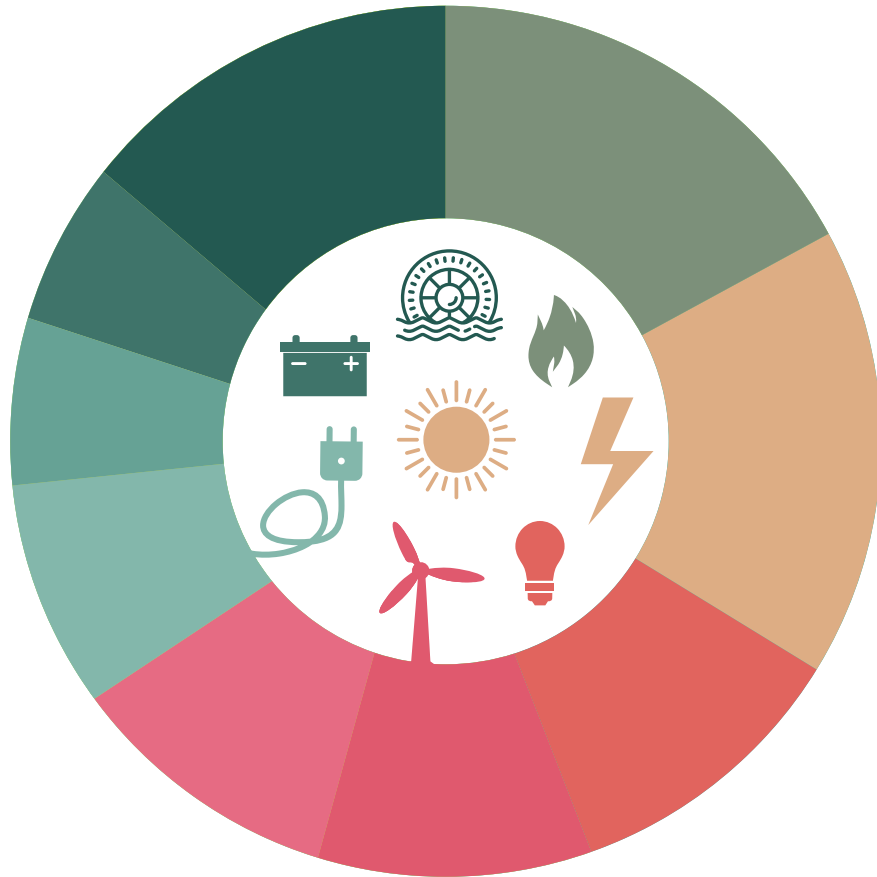
Ynni
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Community Energy
Wales

Community Energy Wales is a not-for-profit membership organisation which provides support to community energy organisations.

Join our growing network and support the Welsh community energy sector by becoming a member. Help keep the benefits from the energy transition in Wales and our communities.

Contact us for more information:

-  02920 190260
-  info@communityenergywales.org.uk
-  @CommEnergyWales
-  www.communityenergywales.org.uk/en/members/join-us



Community Energy

State of the Sector Report

2022